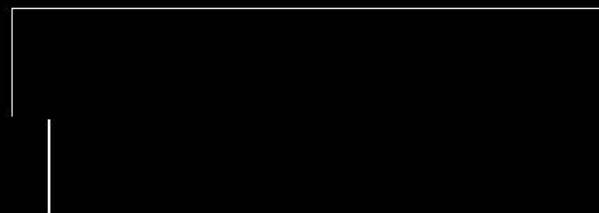




THIEVING MAGPIE

Using on-board GSM/GPRS services to track targets



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On board GSM Services



- Many airlines are offering on-board mobile phone services, particularly for long haul and business class (list is growing)
- At least British Airways are restricting the service to data and SMS only – no voice

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Access

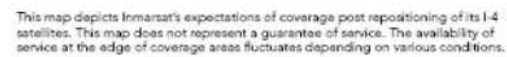


- Comms are ‘backhauled’ to global networks via Inmarsat BGAN satellite terminals
- If flight is in Inmarsat’s Europe, Middle East or Africa (EMEA) region we should have complete access (including content) via Project SOUTHWINDS
- Global coverage via SOUTHWINDS is planned in the next year

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Air France will begin commercial trials of mobile telephony on its A318



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- Provided by two main providers, OnAir and Aeromobile (only access to OnAir at present)
- Offer voice, SMS and data (when above 10,000 ft)
- Mostly on newer aircraft, but is being fitted



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Airlines (Current and Planned)



• OnAir

- BA
- Egypt Air
- Oman Air
- Royal Jordanian
- TAP Portugal
- Wataniya Airways (Kuwait)
- Libyan Airlines
- Air Asia
- TAM Airlines (Brazil)
- Hong Kong Airlines
- Singapore Airways
- Afriqiyah Airways
- Aeroflot
- Qatar Airlines
- Etihad
- Sharjah Ruler's Flight

• Aeromobile (Telenor)

- Emirates
- Malaysian Airlines
- Virgin Atlantic
- Air New Zealand
- Turkish Airlines
- Cathay Pacific
- Lufthansa
- Malaysia
- Qantas
- V Australia
- DragonAir

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Tracking Targets



- If a targets phone is switched on, it will attempt to register to its home network that it using the OnAir service – even if they don't actually make/receive a call
- Registration requests can be combined with the flight number/callsign of the aircraft
- Available in near real time (approximately 10 minute delay)
- Additional & unique Geolocation events

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Cell-IDs

- Each aircraft has at a dedicated GSM LAC with up to three Pico cells
- Usually Cell-IDs begin 901-15, but Aeroflot use MNC 32 (Megafon) instead (presumably for legal intercept)
- GSM reference data can be enriched with Airline name, but not location

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Event details



GSM events										
Refresh		Export		Columns		TDS		Create KR Rule		
Events		1 - 82 of 82		Sort By		Timestamp		Asc		
						Desc				
Geolocate		Seed Numbers (1672)		All Numbers (1672)						MUSTANG
Network	Location Status	MSC	VLR	MCC	MNC	LAC	Cell ID	CGI	LAI	Cell Description
OnAir	Confirmed	8829800202 (I)	8829800202 (I)	901	15	4090	9001	901:15:4090:9001	901:15:4090	Ethad Airways
OnAir	Confirmed	8829800202 (I)	8829800202 (I)	901	15	4090	9001	901:15:4090:9001	901:15:4090	Ethad Airways
OnAir	Assumed	8829800202 (I)	8829800202	901	15			901:15:	901:15:	
OnAir	Unknown	8829800202	8829800202 (I)	901	15			901:15:	901:15:	
OnAir	Unknown	8829800202	8829800202 (I)	901	15			901:15:	901:15:	
OnAir	Unknown	8829800202	8829800202 (I)	901	15			901:15:	901:15:	
OnAir	Unknown	8829800202	8829800202 (I)	901	15			901:15:	901:15:	
OnAir	Assumed	8829800202	8829800202 (I)	901	15			901:15:	901:15:	
OnAir	Confirmed	8829800202 (I)	8829800202 (I)	901	15	4090	9102	901:15:4090:9102	901:15:4090	Ethad Airways
OnAir	Confirmed	8829800202 (I)	8829800202 (I)	901	15	4090	9102	901:15:4090:9102	901:15:4090	Ethad Airways
OnAir	Confirmed	8829800202 (I)	8829800202 (I)	901	15	4090	9102	901:15:4090:9102	901:15:4090	Ethad Airways
OnAir	Confirmed	8829800202 (I)	8829800202 (I)	901	15	4090	9102	901:15:4090:9102	901:15:4090	Ethad Airways

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III. CAPABILITY DEVELOPMENT

User A role	User A type	User A	User A raw value	User A display name	User B role	User B type	User B	User B raw value	User B display name
Fri, 23 Mar 2012 13:56:22 GMT — telephony event (abis) unknown call, 2 selectors, duration: 00:00:00									
Active user: [REDACTED]									
Unknown	imei	[REDACTED]			Unknown	not_available	not_available		
Unknown	imsi	[REDACTED]			Unknown	not_available	not_available		
Locators:									
Source Cell-Global-Identifier [REDACTED]									
Source Flight-Number ETD8271									
Event & Intercept Protective Marking:									
SECRET STRAP1									
More									

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GPRS Events



ITT: CAPABILITY DEVELOPMENT

- ## ITT: CAPABILITY DEVELOPMENT

ITT: CAPABILITY DEVELOPMENT

ITT: CAPABILITY DEVELOPMENT



- We can confirm that targets selectors are on board specific flights in near real time, enabling surveillance or arrest teams to be put in place in advance
- If they use data, we can also recover email address's, Facebook Ids, Skype addresses etc
- Specific aircraft can be tracked approximately every 2 minutes whilst in flight

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ANY QUESTIONS?

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